

SPECIFICATION AMENDMENTS

Replace the paragraph beginning at page 2, line 11 with:

Fig. 5A is a perspective view schematically showing a conventional semiconductor optical device with an S-shaped bent waveguide. Fig. 5B is a sectional view along a ~~cutting~~ line ~~A-A'~~ VB-VB of Fig. 5A. In Figs. 5A and 5B, reference numeral 1 represents an optical waveguide, 11 an n-type InP substrate of a semiconductor chip, 12 an InGaAsP core layer of the optical waveguide, 13 a p-type InP clad layer, and 14 a semi-insulating InP buried layer. Incident light coming from an input end P travels through the S-shaped bent waveguide and shifts in a lateral direction by a distance X and then it goes out from an output end Q. In such a bent waveguide structure, it is important to reduce an optical loss caused by bending. The bending loss is drastically increased, as the radius of curvature of the bent portion of the waveguide becomes smaller than a specified value.

Replace the paragraph beginning at page 3, line 11 with:

In the conventional structure as shown in Figs. 5A and 5B, however, the length L between the input and output ends of the waveguide is relatively long. More specifically, in the case of the semiconductor optical waveguide and letting the radius of curvature ~~being~~ be a ~~minimal~~ minimum of 2400 μm , the length L between the input and output ends of the waveguide for shifting the traveling light in a lateral direction by 200 μm can be given by a geometrical calculation according to formula 1 as follows:

Replace the paragraph beginning at page 5, line 16 with:

Fig. 1B is a sectional view along a ~~cutting~~ line ~~B-B'~~ IB-IB of Fig. 1A;

Replace the paragraph beginning at page 5, line 17 with:

Fig. 1C is an enlarged sectional view showing a main part thereof along a ~~cutting~~ ~~plane~~ line ~~C-C'~~ IC-IC of Fig. 1A;

Replace the paragraph beginning at page 5, line 25 with:

Fig. 3B is an enlarged top plan view showing a main part ~~thereof~~ of the third embodiment;

Replace the paragraph beginning at page 6, line 6 with:

Fig. 5B is a sectional view along a cutting line ~~A-A'~~ VB-VB of Fig. 5A; and

Replace the paragraph beginning at page 6, line 20 with:

A semiconductor optical waveguide device according to the first embodiment of the invention is described below referring to Figs. 1A, 1B and 1C. In this embodiment, each optical waveguide returning part is comprised of a Y-branched optical waveguide (hereinafter, abbreviated as "Y-branched part" or "Y-branched coupler"). Fig. 1A is a perspective view schematically showing a structure of a semiconductor optical device 10 having semiconductor optical waveguides according to the first embodiment of the invention. Fig. 1B is a sectional view along a ~~cutting line B-B'~~ IB-IB of Fig. 1A, and Fig. 1C is an enlarged sectional view showing a main part ~~thereof~~ along a ~~cutting line C-C'~~ IC-IC of Fig. 1A.